

Amendments to the Specification as follows:

[0017] In yet another embodiment, the light source may be a light transmitter with spaced facets fed by a vertical laser. For more details on this embodiment, see U.S. Patent Application No. Serial No. ~~(to be determined / Attorney Docket No. NSC1P307)~~ 10/816,639 (now US Patent 7,099,553) entitled Apparatus and Method for Generating Parallel Beams of Light" by David Graham, co-inventor of the subject application and assigned to the assignee of the present application, filed on the same day as the present application, and incorporated by reference herein for all purposes.

[0019] The light sources, regardless of the type, may also be operated either continuously or periodically, using an on/off cycle. An on/off cycle conserves power, minimizes the heat generated by the source light, and permits temporal filtering to reduce noise, such as lock in detection. During the off cycle, the X light receiving array 20 and a Y light receiving array 22 measure the passive or "dark" light (noise). The dark light measurement is then subtracted in the processor 24 from the active light detected during the on cycle. The subtraction thus filters out DC background caused by the ambient light. During each off cycle, the passive light may also be calibrated, permitting the system to adjust to changing ambient light patterns.

[0021] To reduce power consumption, a "sleep" mode may also be used for the X axis and Y axis light sources 16 and 18 as controlled by sleep mode element 25. If no data inputs are made for a predetermined period of time, the intensity of the X axis and Y axis light sources 16 and 18 may be dimmed. The rate at which shadow interrupts are sampled is also done at a low rate, for example, approximately 5 times a second. When a shadow interrupt is detected, the intensity of the X axis and Y axis light sources 16 and 18 and the sampling rate are all increased to a normal operating mode. If no shadow interrupts are detected after the predetermined period

of time, X axis and Y axis light sources 16 and 18 are again dimmed and the sampling rate reduced.